Logix5000™ Controllers

RSLogix™ 5000 Level 4: Function Block Programming Course Description

COURSE AGENDA

Day 1
- Creating a Function Block Diagram
- Programming Logical Function Block Instructions
- Programming Timer and Counter Function Block Instructions
- Programming Analog Function Block Instructions
- Programming Device Driver Function Block Instructions
- Selecting Timing Modes in a Function Block Instruction

Day 2
- Programming a Totalizer Function Block Instruction
- Programming and Monitoring an RMPS (Ramp/Soak) Function Block Instruction
- Controlling Program Flow Using Function Block Instructions
- Programming a PID Loop Using Function Block Diagram
- Tuning a PID Loop Using Active-X Controls
- Developing an Add-On Instruction in Function Block Diagram

COURSE NUMBER: CCP152

Course Purpose

This course is a skill-building programming course that provides you with an understanding of RSLogix™ 5000 function block diagrams and terminology. This course also provides you with the resources and hands-on practice required to efficiently program a Logix5000 controller using function block diagrams.

You will have an opportunity to use RSLogix 5000 software and perform software tasks to meet the requirements of a given functional specification. In addition to using function blocks, you will perform parameter modifications to individual function block instructions, as well as create and develop function block diagram programs and routines. You will also gain experience with a variety of function block instructions, including PIDE and add-on instructions.

Who Should Attend

Individuals who are responsible for developing, debugging, and programming Logix5000 controllers using RSLogix 5000 software with function block diagrams should attend this course.

Prerequisites

To successfully complete this course, the following prerequisites are required:

- Ability to perform basic Microsoft® Windows® tasks, such as using a mouse, browsing for files, opening, closing, sizing and moving windows

- Understanding of basic measurement and control theory, including basic loop control

- Completion of the *RSLogix 5000 Level 3: Project Development* course (Course No. CCP143) or equivalent experience

Technology Requirements

All technology is provided for student use in the classroom by Rockwell Automation. It is not necessary for students to bring any technology with them when attending this course.

Student Materials

To enhance and facilitate your learning experience, the following materials are provided as part of the course package:

- *Student Manual*, which contains the key concepts, definitions, and examples presented in the course and includes the hands-on exercises.

- *RSLogix 5000 and Logix5000 Procedures Guide*, which provides all of the steps required to complete common Logix5000 tasks. By following the procedures in this job aid, you can immediately apply what is learned in the course to your own job.

Hands-On Practice

To gain real-world programming experience, you will be given a functional specification for a fictitious batch process mixer, where bulk ingredients are mixed to produce a product. You will be the programmer for this batch mixer and must follow the functional specification, which will be the basis for all hands-on exercises in this course.

After completing all exercises, you will have developed a Logix5000 project for the fictitious batch process mixer. As you develop your project, you will be given opportunities to run it using a hardware workstation. This programming and process-based application experience can then be transferred to your own job responsibilities.

Next Learning Level

Once you have mastered the function block diagram skills covered in this course, you will be able to expand your Logix5000 programming knowledge by attending other Logix5000 programming courses, such as the *RSLogix 5000 Level 4: Logix5000 Motion Programming Using Ladder Logic* course (Course No. CCN142).

Course Length

This is a two-day course.

Course Number

The course number is CCP152

IACET CEUs

CEUs Awarded: 1.4

To Register

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at http://www.rockwellautomation.com/training

www.rockwellautomation.com

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